

# EUROPEAN PATENT OFFICE

## Patent Abstracts of Japan

cited in the European Search  
Report of EP 04005815.2  
Your Ref.: 8008-1051

PUBLICATION NUMBER : 09304034  
PUBLICATION DATE : 28-11-97

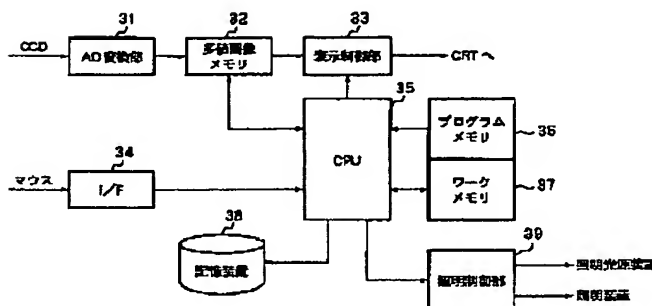
APPLICATION DATE : 15-05-96  
APPLICATION NUMBER : 08144914

APPLICANT : MITSUTOYO CORP;

INVENTOR : KOMATSU KOICHI;

INT.CL. : G01B 11/24

TITLE : LIGHTING CONTROL SYSTEM



**ABSTRACT :** PROBLEM TO BE SOLVED: To enable setting of the optimum lighting conditions without skill to obtain a higher contrast image by calculating contrast values of an image taken under respective lighting conditions a plurality of times to set light conditions with the highest contrast value.

**SOLUTION:** A detection area on an image of an object to be measured shown on a CRT display is specified by a mouse to be inputted into a CPU 35. The CPU 35 provides a command to a lighting control section 39 to photograph the object to be measured with a CCD camera, while increasing the quantity of illumination light at a specified pitch and performs an A/D conversion 31 of the image taken to be stored into a multi-valued image memory 32 as pixel comprising a number of gray level values. Then, a processing is performed to calculate a contrast value in a specified area from a gray level value pixel unit the altering of the quantity of light ends. The results are stored into a work memory 37. Then, after the end of altering the quantity of light, a contract curve is determined as obtained when the quantity of illumination light is changed. A function higher than second order is plotted to the curve by least square to set lighting conditions to maximize the contrast value.

COPYRIGHT: (C)1997,JPO

BEST AVAILABLE COPY